WHAT IS CLAIMED IS:

1. A multicarrier CDMA transmission method for multiplying transmit data individually by each code constituting orthogonal codes and transmitting each result of multiplication by a prescribed subcarrier, comprising steps of:

assigning a plurality of different subcarriers to each user; and

performing multicarrier transmission of the transmit data of a user by the subcarriers assigned.

2. A multicarrier CDMA transmission method according to claim 1, further comprising steps of:

assigning M-number of orthogonal codes to a user;

converting transmit data to parallel data comprising M-number of symbols by a serial-to-parallel conversion;

multiplying an ith symbol of the parallel data individually by each code constituting ith orthogonal codes;

adding corresponding results of multiplication from among the results of multiplication obtained for every symbol; and

transmitting each of the results of addition by the subcarrier assigned.

3. A multicarrier CDMA transmission method according to claim 1, further comprising steps of:

assigning a plurality of subcarriers exclusively to each user; and

applying beam-forming processing user by user and transmitting transmit data to each user by the subcarriers assigned.

4. A multicarrier CDMA transmission method according to claim 1, further comprising steps of:

assigning a plurality of subcarriers exclusively

to each user; and

    performing multicarrier transmission of the
transmit data from each user by the subcarriers
assigned.

5   5. A multicarrier transmission method for multiplying
transmit data individually by each code constituting
orthogonal codes and transmitting each result of
multiplication by a prescribed subcarrier, comprising
steps of:

10   assigning the same subcarriers to a plurality of
users and assigning different orthogonal codes to each
user; and

    transmitting the transmit data of each user by
performing code multiplexing on the same subcarriers.

15   6. A multicarrier CDMA transmission method according
to claim 5, further comprising a step of applying
identical transmit beam-forming processing to the
transmit data of said plurality of users to which the
same subcarriers have been assigned.

20   7. A multicarrier CDMA transmission method according
to claim 1, further comprising steps of:

    extracting, by filtering, a receive signal
component of a frequency domain of subcarriers that
have been assigned to the user; and

25   performing demodulation processing using the
extracted receive signal component.

    8. A multicarrier CDMA transmission method according
to claim 1, further comprising a step of performing
transmission upon dispersing subcarriers along a

30   frequency axis by using frequency interleaving.

    9. A transmitting apparatus of a mobile station in a
multicarrier CDMA transmission system for multiplying
transmit data individually by each code constituting
orthogonal codes and transmitting each result of

multiplication by a prescribed subcarrier, comprising:

a serial/parallel converter for subjecting the transmit data to a serial-to-parallel conversion;

a multiplier for multiplying one symbol of
5 parallel data, which has been obtained by the serial-to-parallel conversion, individually by each code constituting orthogonal codes that have been assigned to a user, and similarly multiplying each symbol of the parallel data individually by each code constituting
10 other orthogonal codes that have been assigned to said user;

a combiner for combining results of multiplication by corresponding codes of each of the orthogonal codes; and

15 a transmitting unit for performing multicarrier transmission of each of the combined results by a plurality of subcarriers that have been assigned to the user.

10. A receiving apparatus of a base station in a
20 multicarrier CDMA transmission system for multiplying transmit data individually by each code constituting orthogonal codes and transmitting each result of multiplication by a prescribed subcarrier, comprising:

a subcarrier separator for separating subcarrier
25 components, on a per-user basis, from a receive signal;

a fading compensator for performing fading compensation on a per-subcarrier basis;

a multiplier/combiner for multiplying each subcarrier component of a plurality of subcarriers that
30 have been assigned to a user by a corresponding code from among codes constituting orthogonal codes that have been assigned to the user, combining results of multiplication, and similarly multiplying each subcarrier component by a corresponding code from among

codes constituting other orthogonal codes that have been assigned to said user and combining results of multiplication;

a parallel/serial converter, which accepts each of the results of multiplication and combination as parallel data, for converting this parallel data to serial data; and

a data demodulator for demodulating data based upon an output signal of said parallel/serial converter.

11. A transmitting apparatus of a base station in a multicarrier CDMA transmission system for multiplying user data individually by each code constituting orthogonal codes and transmitting each result of multiplication by a prescribed subcarrier, comprising:

an array antenna comprising a plurality of antenna elements;

a beaming forming unit for applying beam-forming processing to transmit data of a user and generating transmit data for each antenna element;

a multiplier, which is provided for every antenna element, for multiplying one symbol of transmit data, to which the beam-forming processing has been applied, individually by each code constituting orthogonal codes that have been assigned to a user; and

a transmitting unit, which is provided for every antenna element, for performing multicarrier transmission of results of multiplication by a plurality of subcarriers that have been assigned on a per-user basis.

12. A transmitting apparatus of a base station in a multicarrier CDMA transmission system for multiplying user data individually by each code constituting orthogonal codes, outputting results of multiplication and transmitting each result of multiplication by a

prescribed subcarrier, comprising:

an array antenna comprising a plurality of antenna elements;

a beaming forming unit for applying beam-forming
5   processing to transmit data of a user and generating transmit data for each antenna element;

a serial/parallel converter, which is provided for every antenna element, for converting transmit data, to which the beam-forming processing has been applied, to
10   parallel data;

a multiplier, which is provided for every antenna element, for multiplying one symbol of parallel data, which has been obtained by the serial-to-parallel conversion, separately by each code constituting
15   orthogonal codes that have been assigned to a user and similarly multiplying each symbol of the parallel data individually by each code constituting other orthogonal codes that have been assigned to said user;

a combiner, which is provided for every antenna
20   element, for combining results of multiplication by corresponding codes of each of the orthogonal codes; and

a transmitting unit, which is provided for every antenna element, for performing multicarrier
25   transmission of each of the combined results by a plurality of subcarriers that have been assigned on a per-user basis.

13.   A transmitting apparatus of a base station according to claim 11, wherein a plurality of identical
30   carriers are assigned to a plurality of users, different orthogonal codes are assigned to each user, code multiplexing is performed on the same carriers on a per-antenna basis and transmit data of each user is transmitted.

14. A receiving apparatus of a mobile station in a
multicarrier CDMA transmission system for multiplying
transmit data individually by each code constituting
orthogonal codes and transmitting each result of
5   multiplication by a prescribed subcarrier, comprising:

     a filter unit for extracting subcarrier components,
which have been assigned to a user, from a receive
signal;

     a fading compensator for performing fading
10   compensation on a per-subcarrier basis;

     a multiplier/combiner for multiplying each
subcarrier component of a plurality of subcarriers that
have been assigned to a user by each code constituting
orthogonal codes that have been assigned to the user,
15   combining results of multiplication, and similarly
multiplying each subcarrier component by each code from
among codes constituting other orthogonal codes that
have been assigned to the user and combining results of
multiplication;

20   a parallel/serial converter, which accepts each of
the results of multiplication and combination as
parallel data, for converting this parallel data to
serial data; and

     a data demodulator for demodulating data based
25   upon an output signal of said parallel/serial converter.